

ABSTRACT

An inductive charger is adapted for a portable electrical devices or information products and connects with a rectifier for charging. The inductive charger includes a hollow carrier, at least a coil surrounding an outer surface of the carrier, fixed magnets and at least a sliding magnet. The carrier has a pair of end portions opposite to each other, and the fixed magnets are respectively located on the end portions of the carrier. N poles and S poles of the fixed magnets are oriented coincident with each other. The sliding magnet is located between the fixed magnets, and N pole and S pole of the sliding magnet is opposing to N poles and S poles of the fixed magnets. When the carrier is driven, the sliding magnet moves back and forth between the fixed magnets due to magnetic repulsion of the sliding magnet, which changes flux of the coil thereby producing induced electromotive force. With quick moving of the sliding magnet, the induced electromotive force speeds up varying of flux, thereby increasing instantaneous flux. Consequently, the induced electromotive force increases and produces induced current of large magnitude. The inductive charger charges a battery quickly without restriction of place and external power and protects environment.